

## REMARKS

Claims 32-51 were pending in the application prior to this amendment. By this amendment, all previous claims have been cancelled and replaced with new claims 32-51 set forth above. The claims as now amended are fully supported by the subject matter set forth in the issued claims and the previously submitted claims. No new matter has been added by the claims.

Applicants note that there appears to be a conflict between the pre-existing rules governing amendments in reissue applications and the newly enacted rules pursuant to the American Inventor Protection Act. In particular, it is Applicants' understanding, as per previous notices issued in the present application, that any new or amended claim not found in the issued patent should be underlined in its entirety. On the other hand, the new rules require the submission of two sets of amended claims: a clean set and a marked up set. Please advise whether or how the new rules apply to reissue applications.

### I. THE AMENDED CLAIMS ARE PROPER FOR REISSUE.

The reissue statute and associate rules and case law clearly allow for the filing of reissue applications to broaden the scope of previously issued claims. According to 35 U.S.C. § 251

Whenever any patent is, through error without any deceptive intention, deemed wholly or partly inoperative . . . by reason of the patentee claiming more *or less* than he had a right to claim in the patent, the Director shall . . . reissue the patent for the invention disclosed in the original patent, and in accordance with a new and amended application. . . .

No reissued patent shall be granted enlarging the scope of the claims of the original patent *unless applied for within two years from the grant of the original patent.*

Emphasis added.

The only restrictions to obtaining broadened claims during reissue are that (1) the error arose “without any deceptive intention” (*id.*); (2) a reissue application seeking to enlarge the scope (*i.e.*, broaden) the issued claims must be filed within two years of grant of the subject patent (*id.*; M.P.E.P. § 1403); (3) the reissue claims must be to the “same general invention” (M.P.E.P. § 1412.01); (4) the reissue claims must not *improperly* recapture subject matter “surrendered” during prosecution of the subject patent (*see* M.P.E.P. § 1412.02); and (5) the subject matter defined by the reissue claims must be patentable over the prior art and satisfy any other general requirements for patentability.

The issue of no deceptive intention is not an extensive factual inquiry but can be summarily satisfied by a statement in the reissue oath or declaration that the error being corrected arose “without any deceptive intention”. Such a statement can be found at ¶ 6 of the reissue oath or declaration submitted concurrently herewith.

Applicants will now show that the reissue claims satisfy the other four requirements set forth above.

**A. The Present Reissue Application was Filed Within Two Years of Grant.**

The reissue application was filed September 2, 1999, which is within 2 years of the grant of U.S. Patent No. 5,662,731, which issued September 2, 1997. According to M.P.E.P. § 1412.03, “[a] reissue application filed on the 2-year anniversary date is considered to be filed within 2 years of the patent grant” (citing *Switzer v. Stockman*, 333 F.2d 935, 142 USPQ 226 (CCPA 1964)). M.P.E.P. § 1412.03 further states that “a broadened claim can be presented *after* two years from the grant in a broadening reissue which was filed *within* two years from the grant” so long as “any intent to broaden is indicated in the reissue application within the two years” (emphasis in original).

Since the claims presented in the original reissue application, though different from the claims now presented, were themselves broadening relative to the issued claims, they manifested the requisite intent to broaden the claims in the reissue application within the two-year period from grant. Accordingly, Applicants are now entitled to present broadening claims at any time during the pendency of the present broadening reissue application.

**B. Claims 32-51 are for the "Same General Invention" as the Issued Claims.**

The reissue claims are sufficiently related to the issued claims such that they are for the "same general invention" as defined in M.P.E.P. § 1412.01 and the supporting case law. The "same invention" requirement "does *not* mean that the invention claimed in the reissue must have been claimed in the original patent. . . . The entire disclosure, not just the claim(s), is considered in determining what the patentee objectively intended as his or her invention" (M.P.E.P. § 1412.01) (emphasis in original). M.P.E.P. § 1412.01 sets forth a two-part test to determine whether the claims in a reissue application satisfy the requirements of 35 U.S.C. § 251:

Claims presented in a reissue application are considered to satisfy the requirement of 35 U.S.C. § 251 that the claims be "for the invention disclosed in the original patent" where:

(A) the claims presented in the reissue application are described in the original patent specification and enabled by the original patent specification such that 35 U.S.C. § 112 first paragraph is satisfied; and

(B) nothing in the original patent specification indicates an intent not to claim the subject matter of the claims presented in the reissue application.

According to the foregoing test set forth in M.P.E.P. § 1412.01, 35 U.S.C. § 251 is satisfied so long as an unclaimed embodiment is disclosed in a manner that satisfies 35 U.S.C. § 112, ¶ 1 and so long as the specification does not *indicate an intent not to claim the subject matter*. M.P.E.P. §

1412.01 gives, as an example of an intent not to claim certain subject matter, a situation where “[t]he original patent specification discloses that composition X is not suitable (or not satisfactory) for molding an item because composition X fails to provide quick drying. . . . A claim to composition X . . . would not be permitted . . . because the original patent specification contained an explicit statement of intent *not* to claim composition X” (emphasis in original).

Applying the two-part test of M.P.E.P. § 1412.01 to the reissue claims, the Office Action does not allege that the claims are not adequately supported by 35 U.S.C. § 112, ¶ 1. Nor has the Office Action pointed to any teaching or suggestion in the specification “indicat[ing] an intent *not to claim* the subject matter” (emphasis added). Accordingly, the claims as now (and previously) presented clearly satisfy the two-part test articulated in M.P.E.P. § 1412.01. Unless the Office Action can show either (A) that the presently amended claims are not adequately supported by the specification or (B) that the “specification indicates an intent not to claim the subject matter of the [reissue] claims”, the Office Action has failed to establish a *prima facie* case that the reissue claims are improper under 35 U.S.C. § 251 according to the two-part test set forth in M.P.E.P. § 1412.01. In short, Applicants submit that the reissue claims satisfy the requirements of 35 U.S.C. § 251.

The Office Action cites to a line of cases that appear to provide a stricter standard than the more liberal two-part test articulated in M.P.E.P. § 1412.01 (*e.g.*, *In re Weiler, et al.*, 229 USPQ 673 (CAFC 1986); *U.S. Industrial Chemicals, Inc. v. Carbide & Carbon Chemicals Corp.*, 315 U.S. at 676 (1942)). In particular, the Office Action cites these cases while arguing that the reissue claims must be drawn to “‘the’ invention disclosed in the original patent, not just ‘any’ and ‘every’ invention for which one might find *some* support in the disclosure of the original patent” (Office Action, p. 17) (emphasis added). The Office Action appears to be unaware that the standard for “same invention” is whether there is § 112, ¶ 1 support (*i.e.*, “some support” may not be enough to satisfy § 112, ¶ 1). Moreover, the more recent CAFC decision in *In re Amos*, 953 F.2d 613, 618-19,

21 USPQ2d 1271, 1274 (CAFC 1991), which is quoted in *M.P.E.P.* § 1412.01, expresses a much more liberal standard than the one asserted by the Office Action:

We conclude that, under both *Mead* and *Rowand*, a claim submitted in reissue may be rejected under the “original patent” clause if the original specification demonstrates, to one skilled in the art, an absence of disclosure sufficient to indicate that a patentee could have claimed the subject matter. Merely finding that the subject matter was “not originally claimed, not an object of the original patent, and not depicted in the drawing,” does not answer the essential inquiry under the “original patent” clause of § 251, which is whether one skilled in the art, reading the specification, would identify the subject matter of the new claims as invented and disclosed by the patentees. In short, the absence of an “intent,” even if objectively evident from the earlier claims, the drawings, or the original objects of the invention is simply not enough to establish that the new claims are not drawn to the invention disclosed in the original patent.

Emphasis added.

Therefore, the CAFC clearly held that § 251 can be satisfied even where this is an “absence of an ‘intent’” on the face of the original application to claim the invention of the reissue claims. Even if “absence of an ‘intent’” is “objectively evident from the earlier claims, the drawings, or the original objects of the invention, § 251 is still satisfied so long as the written description and enablement requirements of 35 U.S.C. § 112, ¶ 1 are satisfied. The CAFC in *In re Amos* clearly held that in order to reject a claim as not being for the “same invention” under 35 U.S.C. § 251, there must be “an absence of disclosure sufficient to indicate that a patentee could have claimed the subject matter” (*i.e.* lack of enabling disclosure). This holding is entirely consistent with the two-part test of *M.P.E.P.* § 1412.01.

Finally, Applicants reviewed the Supreme Court decision set forth in *U.S. Industrial*, and it appears that the Office Action quoted a passage out of context in a manner that obscured what the Supreme Court really said. The complete passage clearly indicates that the issue before the Supreme

Court was the inadequacy of the disclosure rather than the lack of an express intent to claim the subject matter of the reissue claims:

The required intention does not appear if the additional matter covered by the claims of the reissue *is not disclosed in the original patent*. If there be *failure of disclosure* in the original patent of matter claimed in the reissue, it will not aid the patentee that the new matter covered by the reissue was within his knowledge when he applied for his original patent. And it is not enough that an invention might have been claimed in the original patent because it was *suggested or indicated* in the specification.

Emphasis added. In short, the real issue in *U.S. Industrial* was the “failure of disclosure” of the invention defined by the reissue claims rather than a lack of an express intent to claim the subject matter in the reissue claims. This is entirely consistent with the later holding of the CAFC in *In re Amos* and the two-part test set forth in M.P.E.P. § 1412.01.

In conclusion, according to the two-part test articulated in M.P.E.P. § 1412.01, and consistent with the holdings of *In re Amos* and *U.S. Industrial*, the present (and previous) reissue claims are objectively for the “same invention” as the original patent specification because (A) the subject matter now being claimed is fully supported by 35 U.S.C. § 112, ¶ 1 and (B) there is no statement in the specification that “indicates an intent not to claim the subject matter of the [reissue] claims”.

The formation of a starch-based composite composition in which a moisture sensitive starch-based region is protected from moisture attack by an adjacent moisture-resistant coating composition is not some peripheral or unintended “invention” that only finds “some support” in the specification. Rather, it is a central feature of the invention due to the extremely moisture-sensitive nature of the inventive starch-based compositions. As such, there is certainly no indication in the disclosure that would indicate an affirmative “intent” by Applicants “*not* to claim the subject matter of the [reissue] claims”.

**C. Claims 32-51 do not Impermissibly Recapture Surrendered Subject Matter.**

The reissue claims do not embrace subject matter cancelled as a result of a restriction requirement during the pendency of the original patent application. Nor do they seek to *impermissibly* recapture subject matter surrendered to overcome the prior art. Instead, the reissue claims include additional “material” limitations which, in combination with the limitations carried over from the issued claims, clearly limit the subject matter now being claimed such that there is no improper recapture.

**1. *Claims 32-51 do not Embrace Subject Matter Cancelled as a Result of a Restriction Requirement.***

Claims 32-51 are directed to a “starch-based composite composition”. They are not directed to the subject matter cancelled as a result of the restriction requirement, which cancelled subject matter is exemplified by original claim 35:

35. An article of manufacture comprising a foamed structural matrix having interior pores and including a starch-based binder that is at least partially gelled, a plurality of fibers that are substantially homogeneously dispersed throughout the foamed structural matrix, and an inorganic aggregate in a concentration greater than about 20% by weight, wherein the foamed structural matrix has a thickness of less than about 5 mm, and the fibers have an average length of at least about 3 times the average diameter of the interior pores of the foamed structural matrix.

A cursory inspection of claim 35 and the other cancelled claims indicates that the reissue claims embrace substantially different subject matter than what was cancelled in response to the restriction requirement. Unlike the cancelled claims, the present claims are directed to a “starch-based composite composition comprising a first region that includes a starch-based composition and a second region adjacent to the first region that includes a coating composition”. No such composite

composition is embraced by any of the cancelled claims. Accordingly, there is no attempt to recapture subject matter cancelled as a result of the restriction requirement.

Moreover, the claims embrace subject matter that is more closely related to what was elected rather than what was not elected. During a telephone conversation between the Examiner and John M. Guynn on November 1, 1995, Applicants elected a class of starch-based compositions exemplified by originally-filed claim 1, which, at the time, read as follows:

1. A starch-based composition comprising a starch-based binder in a concentration greater than about 20% by weight, and a fibrous material having an average fiber length of greater than about 2 mm and an average aspect ratio of at least about 10:1, wherein the fibers are substantially homogeneously dispersed throughout the composition.

As evidenced by original claim 1, Applicants elected to prosecute on the merits claims directed to "starch-based compositions" that, at a minimum, only required two separate components: (1) "a starch-based binder" (*e.g.*, gelatinized or ungelatinized native or modified starch) and (2) "a fibrous material". The elected starch-based composition did not require the inclusion of water but encompassed both aqueous and non-aqueous starch-based compositions. This is evidenced by originally filed claim 17, which, at the time of the election, read as follows:

17. The composition of claim 1, *further comprising water* in a concentration from about 15% to about 80% by weight.

Emphasis added. The phrase "further comprising water" clearly suggests that water was optional, but not required, in original claim 1. Accordingly, both aqueous and non-aqueous starch-based compositions were clearly within the scope of the elected invention.

Moreover, there are many compositional aspects associated with the non-elected claims (*see* claim 35). Similarly, there are functional aspects of the elected claims that could form the basis of calling them a "manufacture" under 35 U.S.C. § 101. As will be discussed below, the Supreme



Court has held that the term “composition”, for purposes of understanding the meaning of 35 U.S.C. § 101, broadly embraces “gases, fluids, powders, or solids” including “all composite articles”. Clearly the terms “composition” and “manufacture” have overlapping meanings since a composition can be a solid, including a “composite article”.

In view of the overlapping meanings of the terms “composition” and “manufacture,” it is overly simplistic to classify all aqueous starch-based compositions as “compositions” and all solidified starch-based compositions as “manufactures” under 35 U.S.C. § 101, as if these two terms are mutually exclusive in all cases. They plainly are not. Moreover, to the extent that a claim recites both physical and chemical aspects, it clearly qualifies as both a “composition” and a “manufacture”.

In terms of the originally filed claims, there was no clear demarcation between *pure* “composition” claims, on the one hand, and *pure* “article of manufacture” claims, on the other, as argued by the Office Action. Both the elected and non-elected claims recited chemical and physical aspects of the present invention. Thus, the real issue is not whether the reissue claims, which primarily claim chemical aspects of the invention, may also arguably be drawn to a “manufacture” but rather whether the claims embrace the specific subject matter cancelled in response to the restriction requirement. The Office Action has failed to carefully analyze the specific subject matter of the non-elected claims. More importantly, the Office Action has failed to adequately address the fact that elected claim 1 was not limited to aqueous (and, hence, plastic and deformable) compositions but also included solid compositions that could also be classified as a “manufacture”.

There is no requirement that a “composition of matter” have any particular property or be in any particular physical state. As set forth in 1 Chisum On Patents, § 1.02[2], p. 15:

A composition of matter is an instrument formed by the inter-mixture of two or more ingredients and possessing properties which belong to none of these ingredients in their separate state. . . . The intermixture of ingredients in a composition of matter may be produced by mechanical or chemical operations, and its result may be a

compound substance resolvable into its constituent elements by mechanical processes, or a new substance which can be destroyed only by chemical analysis.”

(Citing 1 W. Robinson, *The Law of Patents for Useful Inventions*, pp. 278-279 (1890)).

Chisum further states that ““this class is a very broad one and embraces chemical compounds, mechanical or physical mixtures, alloys and a great variety of things.”” (Citing 1 A. Deller, *Walker on Patents*, pp. 126-127 (2nd Ed., 1964)). In *Diamond v. Chakrabarty*, 447 U.S. 303, 308 206 USPQ 193-197 (1980), the Supreme Court stated that ““composition of matter’ has been construed consistent with its common usage to include ‘all compositions of two or more substances and . . . all composite articles, whether they be the results of chemical union, or of mechanical mixture, of whether they be gases, fluids, powders, or solids.”” (citations omitted). Thus, the term “composition of matter” has specifically been held to include “solids” and “all composite articles” according to the Supreme Court.

In view of this, there is not a clean line of demarcation between inventions that may be classified as a “composition of matter”, on the one hand, and those which may be classified as a “manufacture”, on the other. The only requirement for something to be a composition of matter is that it include two or more substances or ingredients according to the Supreme Court and Chisum.

In view of the expansive definition of the term “composition of matter”, it is clear that the reissue claims fall within the definition of “composition of matter”. In fact, they include substantially all the limitations of issued composition claim 31 (*i.e.*, limitations 1, 8 and 9 identified at pp. 4-5 of the Office Action relative to claim 31; only item 2 is omitted). For this reason, the reissue claims are clearly within the scope of the elected subject matter. At the very least, they do not embrace the subject matter that was cancelled in response to the restriction requirement, particularly in view of the specific limitations found in the reissue claims not found in the cancelled claims.

This is particularly true in view of the fact that the reissue claims define the claimed compositions in “product-by-process” claim format. In previous related cases, the Examiner has issued different-invention (not different species) restriction requirements between article of manufacture claims, on the one hand, and product-by-process claims, on the other, *even where the product-by-process claims were themselves directed to articles of manufacture*. This indicates that the present Examiner considered product-by-process claims to be in a different statutory class than article of manufacture claims. For this additional reason, the present reissue claims are clearly not of the same statutory class as the claims cancelled as a result of the restriction requirement.

**3. *The Claims Do Not Improperly Recapture Surrendered Subject Matter Because they Fall Within the “Surrender by Way of Argument” Exception to the Recapture Doctrine.***

The Office Action takes the position that reissue claims must include each and every limitation that was either added to the claims during prosecution or which were argued as important for patentability of the claims (Office Action, pp. 2-4).<sup>1</sup> While it is correct that either adding or arguing a limitation can trigger the recapture doctrine according to M.P.E.P. § 1412.02, an exception exists that allows for broadening in some respects -- even removing a limitation relied upon to overcome the prior art -- as long as the claims as a whole are “fundamentally narrow[er]” than the issued claims. (*see* M.P.E.P. § 1412.02, citing *Hester Industries, Inc. v. Stein, Inc.*, 142 F.3d 1472 (CAFC 1998)). One notable exception to the recapture doctrine that applies in the present case is “[i]n the context of a surrender by way of argument” (*Hester* at 142 F.3d at 1482).

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<sup>1</sup> The case relied upon by the Office Action to support its position, *Ball Corp v. United States*, is inapplicable here because the reissue claims are not “of the same or broader scope than those claims that were cancelled from the original application”. The claims are materially narrower in key aspects such that *Ball* does not apply.

In *Hester*, the CAFC specifically articulated an exception to the recapture doctrine barring the recapture of surrendered subject matter in the case where the limitation in question was not inserted into the claims during prosecution *but was merely argued*:

Finally, because the recapture rule may be avoided in some circumstances, we consider whether the reissue claims were materially narrowed in other respects. *See, e.g., Mentor*, 998 F.2d at 996, 27 USPQ2d at 1525 (“Reissue claims that are broader in certain respects and narrower in others may avoid the effect of the recapture rule.”); *Clement*, 131 F.3d at 1470; 45 USPQ2d at 1165. For example, in *Ball* the recapture rule was avoided because the reissue claims were sufficiently narrowed (described by the court as “fundamental narrowness”) despite the broadened aspects of the claims. 729 F.2d at 1438, 221 USPQ at 296. In the context of a *surrender by way of argument*, this principle, in appropriate cases, may operate to overcome the recapture rule when the reissue claims *are materially narrower in other overlooked aspects of the invention*. The purpose of this exception to the recapture rule is to allow the patentee to obtain through reissue a scope of protection *to which he is rightfully entitled* for such overlooked aspects

*Hester*, 142 F.3d at 1482-83 (emphasis added). The CAFC in *Hester* clearly provided an exception that would allow a reissue claim to omit a limitation that was merely “surrender[ed] by way of argument” so long as the reissue claim is “materially narrower in other overlooked aspects of the invention” (*id.*). This “allow[s] the patentee to obtain through reissue a scope of protection to which he is rightfully entitled for such overlooked aspects” (*id.*).

In the present case, the independent claims recite virtually every limitation found in issued claim 31, including each of the limitations added during prosecution (limitations 1, 8 and 9). The only limitation relating to the prior art omitted in the reissue claims is the “fibrous material having an average fiber length greater than about 2 mm” limitation (limitation 2). Because the omitted limitation was found verbatim in originally filed claim 48 (which issued as claim 31), it was not added during prosecution. Hence any “surrender” of this limitation that would trigger the recapture doctrine according to *Hester* arose only “by way of argument,” not by amendment. In view of this, the exception articulated in *Hester* clearly applies to the reissue claims, since they are “materially

narrower in other overlooked aspects of the invention”. In particular, the limitations directed to the “coating composition” portion of the “starch-based composite composition” are “materially narrow in [this previously] overlooked aspect[] of the invention”. The narrowing limitations are “material” because they serve to distinguish over the same art as the fiber length limitation. Accordingly, the reissue claims do not impermissibly attempt to recapture surrendered subject matter but clearly fall within the *Hester* exception.

Since M.P.E.P. § 1412.02 cites approvingly to *Hester* for the proposition that a surrender can occur merely by argument instead of amendment, M.P.E.P. § 1412.02 expressly incorporates the *Hester* exception within the examining guidelines applicable to reissue claims and the recapture doctrine.

## II. THE CLAIMS ARE PATENTABLE OVER THE PRIOR ART OF RECORD.

The Office Action rejects the reissue claims under 35 U.S.C. § 103 as being obvious over WO 91/12186 (WO '186). In response, the claims as now presented are neither taught nor suggested by WO '186. In particular, independent claim 32 lists specific coating compositions that are neither taught nor suggested in WO '186. The same is true for new independent claim 45, which recites a “biodegradable material” composition that may include “a biodegradable polyester resin”. The PET of WO '186 is not “biodegradable”.

Claim 42 alternatively recites a composite composition in which a “laminating composition” is positioned adjacent to a first region including the starch-based composition. In contrast, WO '186 specifically teaches the insertion of sheet materials within the mold *prior to insertion* of aqueous mold material therein. WO '186 neither teaches nor suggest the application of a laminating composition to a *solidified* starch-based composition. Moreover, one of ordinary skill in the art would readily recognize that the interface between the laminate composition and the starch-based

composition would differ depending on when the laminate composition is applied. There would clearly be a different interaction between two regions that are brought together while in a substantially solidified state compared to regions brought together as half solidified and half aqueous regions, followed by heating to solidify the aqueous starch-based region. In short, WO '186 neither teaches nor suggests the claims as now presented.

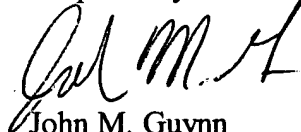
### III. CONCLUSIONS.

In view of the arguments set forth above, Applicants believe the reissue claims are appropriate for reissue and do not constitute inappropriate recapture of cancelled subject matter. Moreover, the claims are believed to be patentable over the prior art of record.

In the event that the Examiner finds any remaining impediment to the prompt allowance of this application, which could be clarified by a telephonic interview, or which is susceptible to being overcome by means of an Examiner's Amendment, the Examiner is respectfully requested to initiate the same with the undersigned attorney.

Dated this 23<sup>rd</sup> day of March 2001.

Respectfully submitted,

  
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